



## Contrast sensors KT5, KT5-2 Display

KT5W-2P1116D



**Model Name** > [KT5W-2P1116D](#)  
**Part No.** > [1026538](#)



#### At a glance

- Intuitive 10-segment bar graph display indicates detection status
- Static 2-point teach-in of mark and background via the control cable
- Maximum detection reliability due to 3-color RGB LED technology
- Switching frequency of 10 kHz
- Automatic gloss adjustment for highly reflective materials
- A range of sensing distances and light spots for numerous applications
- M12 plug can be rotated 90°

#### Your benefits

- All print marks and color combinations are detected, ensuring high throughput
- Reliable operation, even with high-gloss materials
- Detects difficult marks, such as jittering and shiny materials
- High positioning accuracy improves packaging quality
- Application-specific teach-in processes reduce setup times
- Various sensing distances, light spot directions and light emissions make individual configuration and simple integration into the production system possible



#### Features

Dimensions (L x W x H):	80 mm x 30.4 mm x 53 mm
Sensing distance <sup>1)</sup> :	10 mm
Sensing distance tolerance:	± 3 mm
Light source <sup>2), 3)</sup> :	LED red, green, blue
Light emission:	Long and short side of housing, exchangeable
Light spot size:	1.2 mm x 4.2 mm
Light spot direction <sup>4)</sup> :	Vertical
Adjustment:	Static 2-point teach-in with manual fine adjustment

<sup>1)</sup> From front edge of lens   <sup>2)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C   <sup>3)</sup> Wave length: 470 nm, 525 nm, 640 nm   <sup>4)</sup> In relation to long side of housing

#### Mechanics/electronics

Supply voltage V <sub>s</sub> <sup>1)</sup> :	DC 10 V ... 30 V
Ripple <sup>2)</sup> :	≤ 5 V <sub>pp</sub>
Power consumption <sup>3)</sup> :	< 130 mA
Switching frequency <sup>4)</sup> :	10 kHz
Response time <sup>5)</sup> :	50 μs
Output type:	PNP: HIGH = V <sub>S</sub> - ≤ 2 V / LOW approx. 0 V

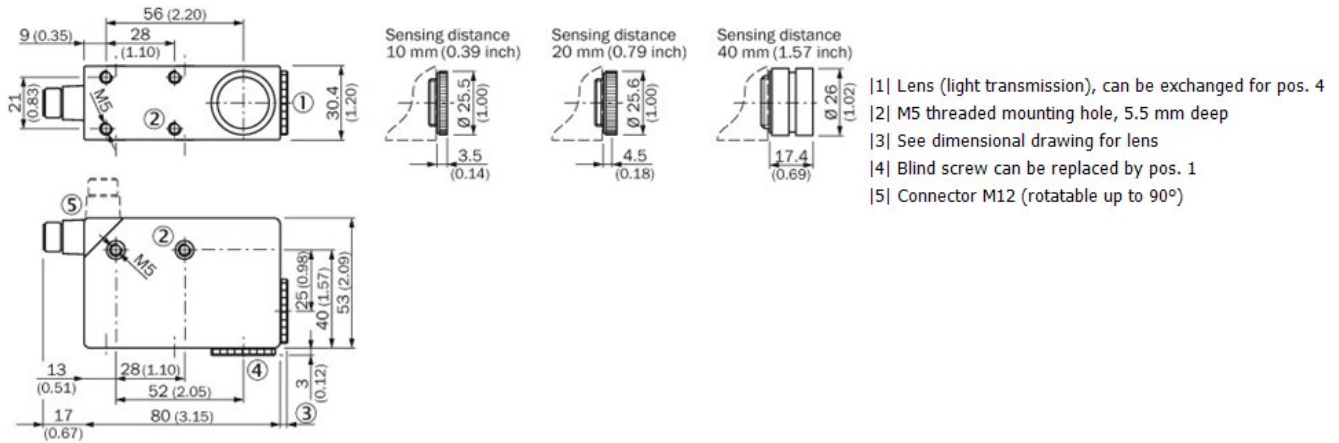
Switching mode:	PNP
Input, teach-in (ET):	PNP: Teach: $U = 10\text{ V} \dots < U_V$ Run: $U < 2\text{ V}$
Retention time (ET):	25 ms, non-volatile memory
Connection type:	Connector M12, 5-pin
Protection class <sup>6)</sup> :	II
Circuit protection:	Output Q short-circuit protected, Interference suppression, VS connections reverse-polarity protected
Enclosure rating:	IP 67
Weight:	Ca. 400 g
Housing material:	Zinc diecast
Output current I <sub>max</sub> .:	100 mA <sup>7)</sup>

1) Limit values: operation in short-circuit protected network max. 8 A    2) May not exceed or fall short of  $V_S$  tolerances <sup>3)</sup> Without load <sup>4)</sup> With light/dark ratio 1:1 <sup>5)</sup>  
Signal transit time with resistive load <sup>6)</sup> Reference voltage DC 50 V    7) Short-circuit protected

### Ambient data

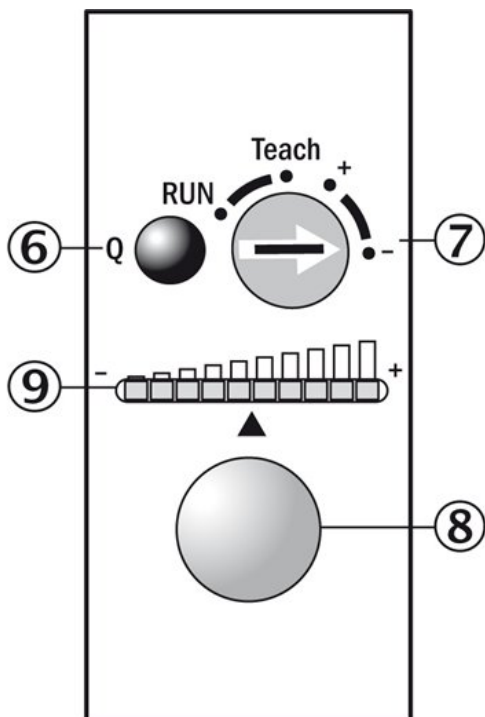
Ambient temperature:	Operation: -10 ... 55 °C Storage: -25 ... 75 °C
Shock load:	According to IEC 60068

### Dimensional drawing



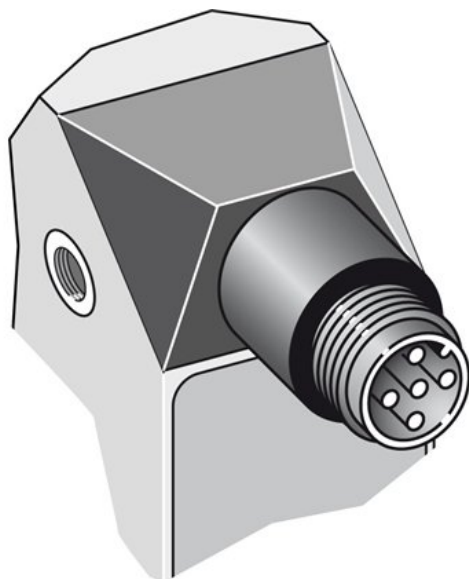
All dimensions in mm (inch)

## Adjustments

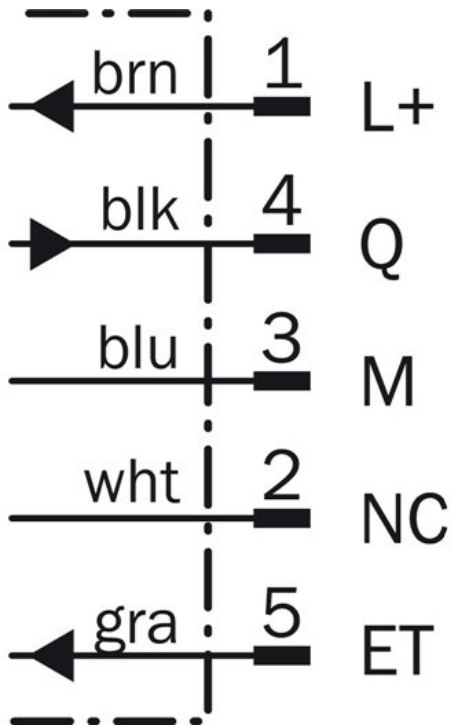


- |6| Function signal indicator (yellow)
- |7| Pre-selection switch
- |8| Teach-in button
- |9| Bar graph (green)

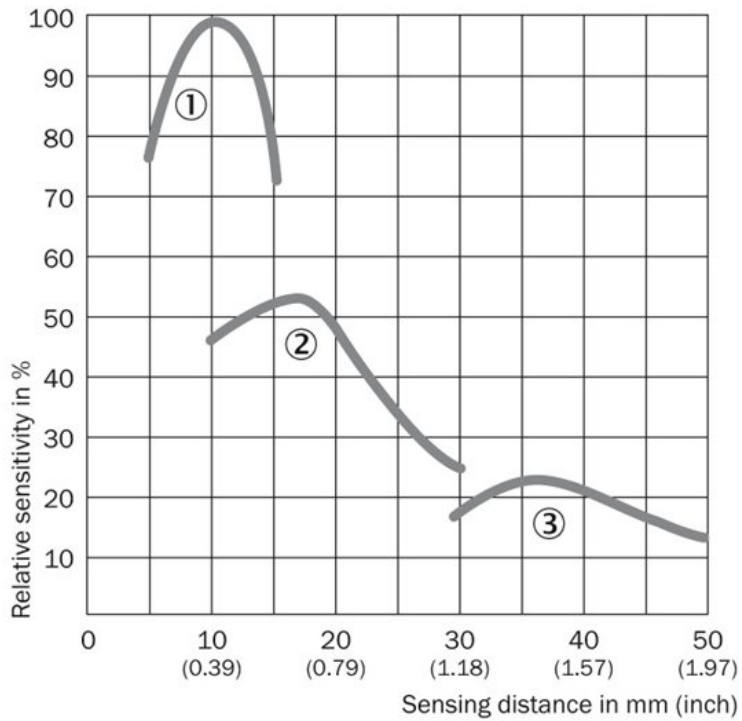
## Connection type



## Connection diagram



## Sensing distance



- [1] Sensing distance 10 mm
- [2] Sensing distance 20 mm
- [3] Sensing distance 40 mm

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